

CONTRIBUTIONS TOWARD A BRYOFLORA OF NEVADA: BRYOPHYTES  
NEW FOR THE SILVER STATE

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ABSTRACT

Thirty-four mosses and two liverworts are reported new for the state of Nevada. The moss family Scouleriaceae is new for the state. Genera new for Nevada include: *Blindia*, *Dichodontium*, *Eucladium*, *Molendoa*, *Orthodicranum*, *Porotrichum*, *Pterigynandrum*, *Rhizomnium*, *Roellia* and *Scouleria*.

Key Words: bryogeography, bryophytes, liverworts, mosses, Nevada, new records.

The bryoflora of the state of Nevada is perhaps the least known of all the western states (Lavin 1981; Spence 1988; Shevock 2002). The earliest bryophyte collecting in Nevada can be traced back to Sereno Watson from 1867–1868 during the Geological Surveys of the Fortieth Parallel (Watson 1871). Bryophyte collections obtained by Baker and Nutting near Carson City in 1902 were subsequently published by Cardot and Thériot (1904). Nearly 50 years later the first catalogue of liverworts and mosses was published for the state of Nevada (Clark 1957; Lawton 1958). Lawton's collections obtained during a 1955 expedition to Nevada remained the largest collection of Nevada mosses for over the next 40 years comprised of 520 specimens obtained from 42 collecting sites within 12 of the 17 counties (Lawton 1958). Additional historic herbarium specimens obtained by previous workers are the basis for the Lawton catalogue. A total of 25 liverworts (Clark 1957) and 144 mosses (Lawton 1958) were reported for Nevada. Since that time several other botanists have reported additional taxa as new to the Nevada bryoflora (Lavin 1981, 1982; Rust and Lavin 1986; Heise 2000; Stark and Whittemore 2000; Stark et al. 2002).

We are now in the process of reviewing the herbarium record of bryophytes obtained from Nevada by previous workers. It has recently come to our attention that another large set of Nevada bryophytes was in the personal herbarium of Hugh Nelson Mozingo, who spent a large portion of his academic career at the University of Nevada, Reno. With Mozingo's death in early 2004, his entire herbarium has subsequently been transferred from his

estate to CAS. Many of his Nevada bryophyte collections remain to be labeled and identified. We plan to produce an updated bryophyte catalogue that incorporates all of these data in a future publication. In the interim, we expect to publish at infrequent intervals, in approximately 25–30 species increments, mosses and liverworts as new to Nevada.

Exactly how many bryophytes occur in Nevada remains quite speculative, but at this time, we are of the opinion that the Nevada bryoflora should well exceed 300 taxa. Therefore, nearly 100 additional species are likely to be documented in the state with further collecting. Our projection is based on three primary factors: 1) a review of existing bryophyte inventories from adjacent states and regions (Flowers 1954, 1961, 1973; Hong 1976, 1978, 1979, 1980, 1983, 1986, 1987, 2002; Howe 1899; Christy et al. 1982; Spence 1988; Christy and Harpel 1997; Váña and Hong 1999; Hong and Matthews 2001; Norris and Shevock 2004), 2) an analysis of plant communities and habitats in Nevada that could provide suitable habitat for species within isolated mountain islands in the Great Basin Ranges where no bryophyte collections have been previously obtained from the state, and 3) the number of specimens misidentified in herbaria.

Prior to our collecting efforts, we have located fewer than 1000 Nevada bryophyte collections residing in herbaria obtained between the years 1880 and 2000. During the 2002 field collecting season alone we had more than doubled the number of Nevada bryophyte collections available for study with specimens obtained from every county (Fig.

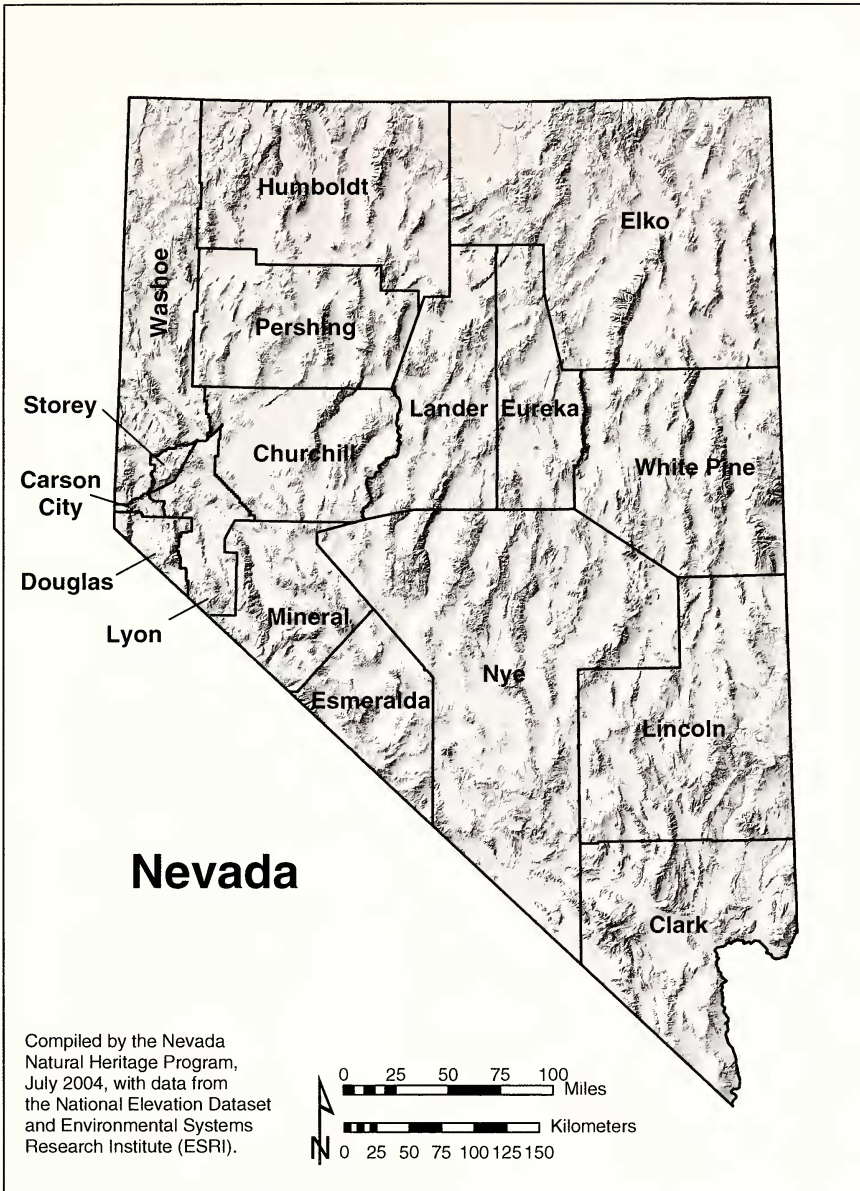


FIG. 1. Location of the 17 counties within the state of Nevada.

1). This publication series format was selected so new state distribution records can be incorporated as they are documented for Nevada into the various treatments for the Bryophyte Flora of North America Project (BFNA).

LIVERWORTS

**Mannia fragrans (Balbis) Frye & Clark** [Aytoniaceae]

**Elko Co.:** slopes above Angel Lake, East Humboldt Mts., Humboldt National Forest, *Shevock & Glazer* 22596 (CAS, MO, NY, UC, UNLV, WTU) [determined by Alan Whittemore; con-

firmed by Bill Doyle]. On compacted soil, alpine areas.

**Porella cordeana (Hübener) Moore** [Porellaceae]

**Elko Co.:** Pine Creek Canyon near confluence with Jarbidge River, Jarbidge Mts., Humboldt National Forest, *Shevock & Glazer* 22783 (CAS, MO, UC, UNLV) [confirmed by Alan Whittemore and Bill Doyle] and *Shevock & Glazer* 26096, 26102 (CAS, UNLV). On shaded rock wall. Although reported for Nevada by Hong (1983) based on *Lawton* 3053 (TENN), this is the exact same collection number listed as *P. roellii* (COLO) in the same paper. While a mixed collection is possible

where one duplicate has *P. cordeana* and another with *P. roellii*, all of the Lawton Nevada liverwort collections were originally examined by Clark, and she determined *Lawton 3053* as *P. roellii* prior to distribution of duplicates. This record of *Porella roellii* in Nevada was cited as *Lawton 3055* in Clark (1957); however, the correct collection number is in fact *Lawton 3053*. *Lawton 3055* is a collection of *Dicranoweisia*.

#### MOSSES

***Blindia acuta* (Hedwig) Bruch & W. P. Schimper** [Seligeriaceae]

**Elko Co.:** Lamoille Canyon above Lamoille Creek off of Ruby Crest Tail to Dollar Lakes, Ruby Mts., Humboldt National Forest, *Shevock & Glazer 22520* (CAS, NY, UC, UNLV), cirque below Greys Peak east of Angel Lake, East Humboldt Mts., Humboldt National Forest, *Shevock & Glazer 22587* (CAS, MO, UC, UNLV) and slopes above Smith Lake north of Angel Campground, *Shevock 25992* (CAS, UBC, UC, UNLV) [confirmed by Wilf Schofield]; **Washoe Co.:** on rocks above high water line of Lake Tahoe, Carson Range, northern Sierra Nevada, Lake Tahoe Basin Management Unit, *Shevock 22048* (CAS, UNLV) [confirmed by Dan Norris]. On rocks, seasonally wet.

***Brachythecium albicans* (Hedwig) Bruch & W. P. Schimper** [Brachytheciaceae]

**Douglas Co.:** South Fork Daggett Creek above Highway 371, Carson Range, northern Sierra Nevada, Toiyabe National Forest, *Shevock 22143* (CAS, UC, UNLV) [determined by Dan Norris]. On soil and litter.

***Brachythecium asperillum* (C. Müller Hal.) Sullivant** [Brachytheciaceae]

**Carson City Co.:** Clear Creek Canyon just south of Highway 50, Carson Range, northern Sierra Nevada, Toiyabe National Forest, *Shevock 21968* (CAS, UC, UNLV); **Eureka Co.:** Jackass Creek, Roberts Mts., *Nachlinger & Tielm 2436* (CAS, UC, UNLV) and North Fork Allison Creek about 2.5 miles northeast of South Fork Pass, Monitor Range, Toiyabe National Forest, *Shevock & Glazer 22376* (CAS, UC, UNLV); **Washoe Co.:** southwest of Truckee Meadows north of Highway 431 along Whites Creek, *Nachlinger & Taylor 2458* (CAS, UC, UNLV), Marlette Reservoir Creek east of Highway 28, Carson Range, northern Sierra Nevada, Lake Tahoe Basin Management Unit, *Shevock & Durham 21971 & 21977* (CAS, UC, UNLV) [determined by Dan Norris]. On soil, frequently at base of boulders and along stream banks.

***Brachythecium plumosum* (Hedwig) Bruch & W. P. Schimper** [Brachytheciaceae]

**Esmeralda Co.:** Morris Creek, north base of Boundary Peak, White Mts., Inyo National For-

est, *Shevock & Glazer 22293* (CAS, UNLV) [determined by Dan Norris]. On rocks along stream banks.

***Brachythecium reflexum* (Starke in Weber & D. Mohr) Bruch & W. P. Schimper** [Brachytheciaceae]

**White Pine Co.:** Sharp Creek, Antelope Range, *Nachlinger 2479* (CAS, UC, UNLV) [determined by Dan Norris]. On rocks along stream banks.

***Brachythecium salebrosum* (Weber & D. Mohr) Bruch & W. P. Schimper** [Brachytheciaceae]

**Elko Co.:** Mahoney Forest Service Station about 1 mile north of the community of Jarbidge, Jarbidge Mts., Humboldt National Forest, *Howell 35* (CAS, UNLV); **Nye Co.:** Strozz Ranch Site south of Wahguyhe Peak, Grapevine Mts., Death Valley National Park, *Shevock & York 21682* (CAS, UC, UNLV) [determined by Dan Norris]. On litter and soil.

***Brachythecium starkei* (Bridel) Bruch & W. P. Schimper** [Brachytheciaceae]

**Douglas Co.:** Pipeline Canyon, eastern slope of Pine Nut Mts., *Shevock, Durham, & Tonenna 22004* (CAS, UNLV) [determined by Dan Norris]. On rocks along stream banks.

***Dichodontium pellucidum* (Hedwig) W. P. Schimper** [Dicranaceae]

**Elko Co.:** Jarbidge River at Lower Bluster Campground, Jarbidge Mts., Humboldt National Forest, *Shevock & Glazer 22726* (CAS, UC, UNLV) [determined by Dan Norris]. On rocks in splash zone of river.

***Didymodon brachyphyllus* (Sullivant in Whipple) Zander** [Pottiaceae]

**Mineral Co.:** Anchorite Hills just east of Anchorite Pass, Highway 359, Wassuk Range, Toiyabe National Forest, *Shevock 22112* (CAS, MO, UC, UNLV); **Nye Co.:** Phinney Canyon northeast of Wahguyhe Peak, Grapevine Mts., Death Valley National Park, *Shevock, York, & Davis 23697* (CAS, MO, UC, UNLV). [determined by Richard Zander]. On rock crevices and underhangs of boulders.

***Didymodon nicholsonii* Culmann** [Pottiaceae]

**Douglas Co.:** Pipeline Canyon, eastern slope of Pine Nut Mts., *Shevock, Durham, & Tonenna 22002* (CAS, MO, UC, UNLV) [determined by Richard Zander]. On soil and litter.

***Eucladium verticillatum* (Hedwig in Bridel) Bruch & W. P. Schimper** [Pottiaceae]

**Clark Co.:** Nickel Creek, Virgin Mts., *Shevock, Glazer, Spence, & Nelson 23647* (CAS, UC, UNLV). On wet soil or rock walls of alkaline springs and seeps.

***Fissidens crispus* Montagne** [Fissidentaceae]

**Washoe Co.:** Highway 28 between Incline Village and Crystal Bay, Lake Tahoe Basin Management



Unit, *Shevock* 22670 (CAS, PAC, UC, UNLV) [confirmed by Ronald Pursell]. On shaded soil at base of boulders.

***Fontinalis neomexicana* Sullivan & Lesquereux** [Fontinalaceae]

**Washoe Co.:** west end of Big Meadow, Carson Range north of Lake Tahoe, *Lavin, Mozingo, & Edgington s.n.* (NY); **White Pine Co.:** Baker Creek at trailhead to Baker Lake above Baker Creek Campground, Great Basin National Park, *Shevock, Glazer, & Clifton* 23242 (CAS, MO, NY, UC, UNLV, WTU) and *Mozingo* 74-44c (NY), 75-095 (NY). Attached to rocks submerged in creek.

***Hypnum revolutum* (Mitten) Lindberg var. *ra-vaudii* (Boulay) Ando** [Hypnaceae]

**Eureka Co.:** White Sage Canyon, Monitor Range, Toiyabe National Forest, *Shevock & Glazer* 22388 (CAS, UBC, UNLV); **Lander Co.:** Toquima Cave area, Toquima Range, Toiyabe National Forest, *Shevock & Glazer* 22358 (CAS, UBC, UNLV) [determined by Wilf Schofield]. On rock walls.

***Molendoo sendtneriana* (Bruch & W. P. Schimper) Limpricht** [Pottiaceae]

**Clark Co.:** Red Rock Canyon BLM National Conservation Area, *Allen* 21895 (MO). On moist soils and rocks.

***Orthodicranum tauricum* (Sapehin) Smirnova** [Dicranaceae]

**Douglas Co.:** South Fork Daggett Creek off of Highway 371 below Daggett Saddle, Carson Range, northern Sierra Nevada, *Shevock* 22147 (CAS, UC, UNLV); **Washoe Co.:** Marlette Reservoir Creek east of Highway 28, Lake Tahoe Basin Management Unit, *Shevock & Durham* 219737 (CAS, UC, UNLV). At base of conifer trunks or rotten logs, primarily on *Calocedrus decurrens*.

***Orthotrichum affine* Schader ex Bridel** [Orthotrichaceae]

**Douglas Co.:** South Fork Daggett Creek above Highway 371 (Kingsbury Grade) about 4.5 miles below Daggett Saddle, Carson Range, northern Sierra Nevada, *Shevock* 22152 (CAS, UNLV) [determined by Dan Norris]. On trunk of *Abies concolor*.

***Orthotrichum flowersii* Vitt** [Orthotrichaceae]

**Nye Co.:** Phinney Canyon, Grapevine Mts., Death Valley National Park, *Shevock, York, & Davis* 23671 (CAS, SIU, UC, UNLV) and Strozzi Ranch Site, south of Wahguyhe Peak, Death Valley National Park, *Shevock, York, & Davis* 21581 (CAS, UNLV) [determined by Dale Vitt and Dan Norris]. While this species is generally corticolous, the Death Valley occurrences are on a vertical rock walls.

***Orthotrichum lyellii* W. J. Hooker & Taylor** [Orthotrichaceae]

**Clark Co.:** Virgin Peak Ridge, Virgin Mts., *Shevock & Spence* 23657 (CAS, UC, UNLV); **Douglas Co.:** eastern slope of Pine Nut Mts., *Shevock, Durham, & Tonenna* 23657 (CAS, UC, UNLV); **Nye Co.:** Phinney Canyon, Grapevine Mts., Death Valley National Park, *Shevock & York* 23704 (CAS, SIU, UNLV) [determined by Dale Vitt] and Strozzi Ranch Site, south of Wahguyhe Peak, Grapevine Mts., Death Valley National Park, *Shevock, York, & Davis* 21593 (CAS, UNLV). On trunks of *Quercus* and rock walls.

***Orthotrichum papillosum* Hampe** [Orthotrichaceae]

**Douglas Co.:** Genoa Creek above town of Genoa, Carson Range, northern Sierra Nevada, Toiyabe National Forest, *Shevock & Durham* 21985 (CAS, MO, UC, UNLV) [determined by Dan Norris]. On trunks of *Alnus* in riparian woodland.

***Orthotrichum pumilum* Swartz** [Orthotrichaceae]

**Elko Co.:** Forest Road 748 near Camp Draw Trailhead, Jarbidge Mts., Humboldt National Forest, *Shevock & Glazer* 22688 (CAS, UC, UNLV) and along Jarbidge River at Lower Bluster Campground, *Shevock & Glazer* 22727 (CAS, UC, UNLV) [determined by Dan Norris]. On rocks and boulders.

***Orthotrichum shevockii* Lewinsky-Haapasaari & Norris** [Orthotrichaceae]

**Carson City Co.:** Voltaire Canyon north of Highway 50, Carson Range, northern Sierra Nevada, Toiyabe National Forest, *Shevock* 21948 (CAS, MO, UC, UNLV) and below Secret Harbor Vista Point off of Highway 28, Lake Tahoe Basin Management Unit, *Shevock* 22038 (CAS, UC, UNLV) [confirmed by Dan Norris]. On crevices and underhangs of granitic rocks and boulders.

***Orthotrichum speciosum* Nees in J. W. Strum** [Orthotrichaceae]

**Washoe Co.:** slope above Highway 28 between Incline Village and Crystal Bay, Carson Range, northern Sierra Nevada, Lake Tahoe Basin Management Unit, *Shevock* 22662 (CAS, UC, UNLV). [determined by Dan Norris]. On rocks and boulders.

***Orthotrichum spjutii* Norris & Vitt** [Orthotrichaceae]

**Lander Co.:** Highway 722 east of Carroll Summit, Desatoya Mts., *Shevock & Glazer* 22408 (CAS, UC, UNLV) [determined by Dan Norris]. On rocks and boulders.

***Plagiomnium cuspidatum* (Hedwig) T. Koponen** [Mniaceae]

**Elko Co.:** below Snowslide Gulch, Jarbidge River, Jarbidge Mts., Humboldt National Forest, *Howell* 6 (CAS, UNLV); **Esmeralda Co.:** Indian Creek 6.5 miles west of Highway 264, White Mts., Inyo

National Forest, *Shevock, Glazer, & Laeger 21833* (CAS, UC, UNLV); **White Pine Co.:** Lehman Creek at Lower Lehman Creek Campground, Snake Range, Great Basin National Park, *Shevock 17775* (CAS, UC, UNLV) [determined by Dan Norris]. On shaded and moist soil and litter, generally about springs and stream banks.

***Polytrichum piliferum* Hedwig** [Polytrichaceae]

**Elko Co.:** west side of Angel Lake, East Humboldt Mts., Humboldt National Forest, *Shevock & Glazer 22556* (CAS, UC, UNLV, WTU), Lamoille Canyon, Lamoille Creek along Ruby Crest Trail to Dollar Lakes, Ruby Mts., Humboldt National Forest, *Shevock & Glazer 22493* (CAS, UC, UNLV), Jarbidge River at Lower Bluster Campground, Jarbidge Mts., Humboldt National Forest, *Shevock & Glazer 22737* (CAS, NY, UC, UNLV); **Mineral Co.:** east slopes of Mount Grant, Wassuk Range, Toiyabe National Forest, *Nachlinger & Tiehm 2449* (CAS, MO, UC, UNLV). On dry soil among rocks.

***Porotrichum bigelovii* (Sullivant) Kindberg** [Neckeraceae]

**Clark Co.:** Lost Creek, BLM Red Rock Canyon National Conservation Area, *Shevock & Stark 23975* (CAS, UC, UNLV). Shaded seep of rock wall.

***Pterigynandrum filiforme* Hedwig** [Pterigynandraceae]

**Carson City Co.:** Highway 28 just south of the Washoe County line below Vista Point north of Secret Harbor, Carson Range, northern Sierra Nevada, Lake Tahoe Basin Management Unit, *Shevock 22052* (CAS, MO, UC, UNLV). At base of conifer trunks.

***Rhizomnium pseudopunctatum* (Bruch & W. P. Schimper) T. Koponen** [Mniaceae]

**Elko Co.:** Stringer of Bear Creek paralleling Forest Road 748 north of Bear Creek Summit, Jarbidge Mts., Humboldt National Forest, *Shevock & Glazer 22700* (CAS, UC, UNLV) and *22712* (CAS, UC, UNLV) [confirmed by Dan Norris]. On moist and shaded soil and litter of stream banks.

***Roellia roellii* (Brotherus in Röhl) Andrews ex H. Crum** [Mniaceae]

**Elko Co.:** along Forest Road 748 north of Bear Creek Meadow toward Jarbidge River, Jarbidge Mts., Humboldt National Forest, *Shevock & Glazer 22721* (CAS, MO, UC, UNLV), Forest Trail 106 at Sawmill Creek, Jarbidge Wilderness, *Shevock, Glazer, & Howell 26109* (CAS, MO, NY, UC, UNLV) and west of Bear Creek Summit toward Coon Creek, *Shevock & Glazer 26083* (CAS, UC, UNLV). On shaded soil and litter in forest understory.

***Schistidium cinclidodontum* (C. Müller Hal. in Röhl) B. Bremer** [Grimmiaceae]

**Nye Co.:** Above Strozzi Ranch Site south of Wahguyhe Peak, Grapevine Mts., Death Valley National Park, *Shevock & York 21686* (CAS, KRAM, UC) [confirmed by Ryszard Ochyra]. **Washoe Co.:** slopes west of Pyramid Lake, *Tonnenna 5* (CAS, KRAM, UNLV) [confirmed by Ryszard Ochyra]. On rock slabs of intermittent stream channels and rivulets.

***Scouleria aquatica* W. J. Hooker in Drummond** [Scouleriaceae]

**Elko Co.:** Lamoille Creek adjacent to Ruby Crest Trailhead, Lamoille Canyon, Ruby Mts., Humboldt National Forest, *Shevock & Glazer 22473* (CAS, UC, UNLV). On rocks in splash zone of creek or on boulders seasonally submerged.

***Sphagnum squarrosum* Crome** [Sphagnaceae]

**Elko Co.:** Copper Basin Bog, south of Coon Creek Summit and east of Copper Mountain, Jarbidge Mts., Humboldt National Forest, *Howell 11* (CAS, UNLV) [confirmed by Richard Andrus] and Cherry Creek about 5 air miles south of the Idaho/Nevada state line, *Howell 38* (CAS, UNLV) [determined by Richard Andrus]. Fen habitats.

***Sphagnum subsecundum* Nees in Sturm** [Sphagnaceae]

**Washoe Co.:** fen above Ophir Creek and about 1 mile below Tahoe Meadows, Carson Range, northern Sierra Nevada, Toiyabe National Forest, *Matson 975* (CAS) [determined by Richard Andrus].

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## LITERATURE CITED

- CARDOT, J. AND I. THÉRIOT. 1904. New and unrecorded mosses of North America. *Botanical Gazette* 37:363–382.
- CHRISTY, J. A. AND J. HARPEL. 1997. Rare bryophytes of the Interior Columbia River Basin and Northern Great Basin, U.S.A. *Journal of Hattori Botanical Laboratory* 82:61–75.
- , J. H. LYFORD, AND D. H. WAGNER. 1982. Checklist of Oregon mosses. *The Bryologist* 85:22–36.
- CLARK, L. 1957. Hepaticae collected in Nevada by Elva Lawton in 1955. *The Bryologist* 60:32–35.
- FLOWERS, S. 1954. Liverworts of Utah. *Proceedings Utah Academy of Sciences* 31:93–100.
- . 1961. Hepaticae of Utah. *University of Utah Biological Series* 12:1–108.
- . 1973. *Mosses: Utah and the West*. Brigham Young University Press, Provo, UT [reprinted by Blackburn Press, Camden, NJ, 2001].
- HEISE, K. L. 2000. Bryophytes in riparian areas in the Toiyabe Range of Central Nevada. *Evansia* 17:63–67.
- HONG, W. S. 1976. An annotated checklist of the Hepaticae of Idaho. *The Bryologist* 79:422–436.
- . 1978. A preliminary assessment of the hepatic flora of Oregon. *The Bryologist* 81:437–442.
- . 1979. The genus *Scapania* in western North America. I. Historical background. *The Bryologist* 82:181–188.
- . 1980. The genus *Scapania* in western North America. II. Taxonomic treatment. *The Bryologist* 83:40–59.
- . 1983. The genus *Porella* in North America west of the hundredth meridian. *The Bryologist* 86:143–155.
- . 1986. The family Cephalozellaceae in North America west of the hundredth meridian. *The Bryologist* 155–162.
- . 1987. The distribution of western North American Hepaticae. Endemic taxa and taxa with a North Pacific Arc distribution. *The Bryologist* 344–361.
- . 2002. The distribution of *Lophozia* in North America west of the hundredth meridian. *Lindbergia* 27:49–62.
- AND W. MATTHEWS. 2001. *Barbilophozia* in western North America. *Lindbergia* 26:134–142.
- HOWE, M. A. 1899. The Hepaticae and Anthocerotae of California. *Memoirs Torrey Botanical Club* 7:1–208.
- LAVIN, M. 1981. New records for the moss flora of Nevada. *The Bryologist* 84:93–94.
- . 1982. Distribution of the moss family Grimmiaceae in Nevada. *Great Basin Naturalist* 42:583–588.
- LAWTON, E. 1958. Mosses of Nevada. *The Bryologist* 61:314–340.
- NORRIS, D. H. AND J. R. SHEVOCK. 2004. Contributions toward a bryoflora of California I. A specimen-based catalogue of mosses. *Madroño* 51:1–131.
- RUST, R. AND M. LAVIN. 1986. Noteworthy collections: Nevada. *Madroño* 33:150.
- SHEVOCK, J. R. 2002. Bryophytes: the miniature forests overlooked across Nevada. *Nevada Native Plant Society Bulletin* 28:5–9.
- SPENCE, J. R. 1988. Checklist of the mosses of the Intermountain West, USA. *Great Basin Naturalist* 48:394–401.
- STARK, L. R. AND A. T. WHITTEMORE. 2000. Bryophytes from the northern Mojave Desert. I. A list of reported species. *Southwestern Naturalist* 45:226–232.
- , A. T. WHITTEMORE, AND B. D. MISHLER. 2002. Noteworthy bryophyte records from the Mojave Desert. *Madroño* 49:49–53.
- VÁÑA, J. AND W. S. HONG. 1999. The genus *Jungermannia* in western North America. *Lindbergia* 24:133–144.
- WATSON, S. 1871. Botany. Report of the exploration of the 40th Parallel, Vol. 5, pl. 1–40. *Professional Papers, Engineering Department, U.S. Army, Washington, DC*.